

WHAT IS CLAIMED IS:

1. A laminate article comprising at least two layers of soft plasticized polyvinylbutyral (PVB) sheet having a T_g in the range of from about 32°C to about 35°C and
5 further comprising at least one layer of a stiff PVB interlayer sheet, wherein the stiff interlayer: (i) has a T_g of from about 35°C to about 60°C; (ii) is positioned between at least two layers of soft PVB; and, (iii) comprises a bleaching compound.
- 10 2. The article of Claim 1 wherein the stiff PVB includes plasticizer in an amount of from about 5 pph to less than about 30 pph.
3. The article of Claim 2 wherein the plasticizer is present in an amount of from about 15 pph to less than
15 about 30 pph.
4. The article of Claim 3 wherein the plasticizer is present in an amount of from about 18 to about 25 pph.
5. The article of Claim 4 wherein the plasticizer is present in an amount of from about 18 to about 22 pph.
- 20 6. The article of Claim 2 wherein the plasticizer is a plasticizer or a mixture of plasticizers selected from the group consisting of: diesters obtained from the chemical reaction of aliphatic diols with carboxylic acids, including diesters of polyether diols
25 or polyether polyols; and, esters obtained from polyvalent carboxylic acids and aliphatic alcohols.
7. The article of Claim 6 wherein the plasticizer is selected from the group consisting of: diesters obtained by the reaction of triethylene glycol with
30 aliphatic carboxylic acids having from 6 to 10 carbon atoms; and esters obtained from the reaction of sebacic acid with aliphatic alcohols having from 1 to 18 carbon atoms.
8. The article of Claim 7 wherein the plasticizer is
35 triethylene glycol 2-ethylhexanoate.

9. The article of Claim 7 wherein the plasticizer is dibutyl sebacate.
10. The article of Claim 6 wherein the stiff PVB comprises a surfactant selected from the group
- 5 consisting of anionic surfactants, including: sodium lauryl sulfate, ammonium lauryl sulfate, sodium sulfosuccinate, ammonium perfluorocarboxylates having from 6 to 12 carbons, sodium aryl sulfonates, adducts of chlorinated cyclopentadiene and maleic anhydride,
- 10 partially neutralized polymethacrylic acid, alkylaryl sulfonates, sodium dialkylaryl polyether sulfonate, triethanolamine lauryl sulfate, diethyl cyclohexyl ammonium lauryl sulfate, sodium dialkyl sulfonates, sulfated fatty acid esters, sulfated aryl alcohols,
- 15 sodium dialkylsulfosuccinates, and the like.
11. The article of Claim 10 wherein the surfactant is selected from the group consisting of: sodium sulfosuccinate; and sodium dialkylsulfosuccinates.
12. The article of Claim 11 wherein the surfactant is
- 20 a sodium dialkylsulfosuccinate.
13. The article of Claim 12 wherein the surfactant is sodium dioctylsulfosuccinate (DOSS).
14. The article of Claim 13 wherein the bleaching compound is selected from the group consisting of:
- 25 sodium dialkylsulfosuccinates; sodium sulfosuccinates; organic bisulfites; inorganic bisulfites; and the like.
- 15 The article of Claim 14 wherein the bleaching compound is a sodium dialkylsulfosuccinate.
16. The article of Claim 15 wherein the bleaching
- 30 compound is sodium dioctylsulfosuccinate.
17. The article of Claim 16 wherein the PVB comprises an antioxidant.
18. The article of Claim 17 wherein the antioxidant is a substituted diphenolic compound.

19. The article of Claim 18 wherein the stiff PVB sheet has a thickness in the range of from about 0.1 mm to about 0.75 mm.

20. The article of Claim 19 wherein the stiff PVB
5 sheet has a thickness in the range of from about 0.15 mm to about 0.72 mm.

21. The article of Claim 20 wherein the stiff PVB sheet has a thickness in the range of from about 0.20 mm to about 0.70 mm.

10 22. The article of Claim 21 wherein the stiff PVB sheet has a thickness in the range of from about 0.25 mm to about 0.68 mm.